CONFIDENTIAL

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

SAUL CHILL and SYLVIA CHILL, for the use and benefit of the CALAMOS GROWTH FUND, Plaintiffs, v. CALAMOS ADVISORS LLC Defendants.	No. 15-cv-01014 (ER) ECF CASE

DECLARATION OF GLENN HUBBARD

1. My name is Robert Glenn Hubbard. I am a resident of New York, New York. I have been retained by Defendants in this matter to assess, from an economic and comparative perspective, the fees paid by the Calamos Growth Fund ("Fund"), a mutual fund advised and managed by the Defendant, Calamos Advisors LLC ("Calamos"), to Calamos, during the period from February 11, 2014, through the present. As part of this analysis, I evaluated indicia of the nature and quality of services that Calamos provided to the Fund. I was also asked to assess the economies of scale in the mutual fund industry. I submitted an expert report in this matter dated June 26, 2017. My CV is attached as Appendix A-1 to that report.

2. Counsel has asked me to provide this declaration to respond to certain contentions made in the Supplemental Declaration of Steve Pomerantz, dated February 9, 2018. In particular, I was asked to opine on Dr. Pomerantz's attempt to support the assumptions underpinning the alternative cost allocation he offered in his initial expert report dated May 11, 2017.

3. In his initial expert report, Dr. Pomerantz puts forward an alternative cost allocation of pre-distribution and marketing expenses. [redacted]

[redacted][1] A necessary implication of this assumption is that economies of scale do not vary with the level of output (assets). That is, regardless of the level of a fund's assets, a one percent change in assets is assumed to lead to a fixed percentage change in total cost.

4. [redacted] Dr. Pomerantz's Supplemental Declaration claims that his alternative allocation is an accepted approach to evaluating economies of scale.[2]

> These models traditionally *assume that the cost of manufacturing a given output is related to the amount of that output through a linear relationship of their respective logarithms.* That is to say that the percentage changes are approximately linearly related. As applied to the investment management industry, output is usually considered to be the assets under management. *This approach to evaluating economies of scale is both established and widely-known.*[3]

5. Dr. Pomerantz cites two articles as purported evidence that his approach to evaluating economies of scale is standard:[4]

> The methods and statistical techniques I have used in this regard are based on *standard approaches to the analysis of economies of scale*. In particular, the models I have used, often referred to as 'Cobb-Douglas' are discussed by Marc Nerlove in an article entitled 'Returns to Scale in Electric[ity] Supply' and by Laurits Christensen and William Greene in an article entitled, 'Economies of Scale in U.S. Electric Power Generation.'[5]

6. While Dr. Pomerantz is correct that the Cobb-Douglas production function is widely used for many purposes, neither of the articles implies that the Cobb-Douglas production function is used to evaluate economies of scale. To the contrary, both articles cited by Dr. Pomerantz find that his approach to analyzing economies of scale is not correct.

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[1] [redacted] (Pomerantz Report, ¶ 487)

[2] Supplemental Declaration of Steve Pomerantz, February 9, 2018, ¶ 2.

[3] Supplemental Declaration of Steve Pomerantz, February 9, 2018, ¶ 2 (emphasis added).

[4] Both of the articles cited in the Pomerantz declaration focus on electricity production. Neither article discusses the mutual fund industry.

[5] Supplemental Declaration of Steve Pomerantz, February 9, 2018, ¶ 2 (emphasis added).

Specifically, both articles find that the relationship between the logarithm of costs and the logarithm of output (assets) is *not* linear. As such, the articles listed by Dr. Pomerantz as purported support for his proposed methodology for analyzing economies of scale actually directly contradict the assumptions underlying Dr. Pomerantz's approach.

7. The article by Marc Nerlove evaluates whether assuming a linear relationship between the logarithms of costs and output is an appropriate approach to evaluating returns to scale.[6] Professor Nerlove reports that "It is clear that neither regression relationship is truly linear in logarithms."[7] That is, Professor Nerlove finds that an assumption underlying Dr. Pomerantz's model is incorrect. Professor Nerlove further finds that large firms exhibit systematically lower returns to scale, and concludes that "the degree of returns to scale varies inversely with output."[8] These findings are contrary to the assumptions on which Dr. Pomerantz's cost model and purported analysis of economies of scale are based.

8. In the only other article referenced in Dr. Pomerantz's Supplemental Declaration, Laurits R. Christensen and William H. Greene study economies of scale using a translog production function that "allows scale economies to vary with the level of output."[9] The translog cost function builds on Professor Nerlove's observation that the relationship between the logarithm of costs and the logarithm of output (i.e., assets) is *not* linear. Dr. Christensen and Dr. Greene report that their analysis "confirm[s] our expectation that scale economies diminish as firm size increases."[10] They further conclude that "scale

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[6] Nerlove, M. "Returns to Scale in Electricity Supply." In *Measurement in Economics —Studies in Mathematical Economics and Econometrics in Memory of Yehuda Grunfeld*, edited by Carl F. Christ. Stanford, Calif.: Stanford Univ. Press, 1963, pp. 167-198. Returns to scale are defined based on the relationship between inputs and output. The concept is related to, but not identical to, economies of scale, which are defined based on the relationship between output and costs.

[7] Nerlove (1963), p. 179.

[8] Nerlove (1963), p. 186.

[9] Laurits R. Christensen and William H. Greene, "Economies of Scale in U.S. Electric Power Generation," *Journal of Political Economy*, 1976, pp. 655-676, at p. 659.

[10] Christensen and Greene (1976), p. 667. The authors also report, "Our primary finding, then, is that the U.S. electric power industry can be characterized by substantial scale economies at low levels of output. But the implied decreases in average cost diminish in importance for larger firms, resulting in an average cost curve which is very flat for a broad range of output." (p. 656)

economies appear to be exhausted by firms well within the size range of the sample."[11] The assumption upon which Dr. Pomerantz's model is based does not allow for the possibility that economies of scale diminish as fund size increases or that economies of scale exist at low levels of assets but not at higher level of assets. As such, Christensen and Greene's findings also contradict the assumption upon which Dr. Pomerantz's cost model and purported analysis of economies of scale are based.

9. In summary, the only two articles cited in Dr. Pomerantz's Supplemental Declaration report that the assumption upon which Dr. Pomerantz's alternative cost allocation approach hinges *is inconsistent with their data and is not an appropriate approach to evaluating economies of scale.*

10. I declare under penalty of perjury that the foregoing is true and correct.

Respectfully submitted, this 23rd day of February 2018,

R Glenn Hubbard

Glenn Hubbard

[11] Christensen and Greene (1976), p. 669.